

Grant Avenue Bridge
(Prosser Steel Bridge)
Spans Yakima River at Grant Avenue
Prosser
Benton County
Washington

HAER No. WA-4

HAER
WASH,
3-PROS
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Western Regional Office
National Park Service
San Francisco, California 94102

HISTORIC AMERICAN ENGINEERING RECORD

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Location: Spans Yakima River at Grant Avenue
Prosser, Benton County, Washington

UTM: 11.286520.5121230
Quad: Prosser
Scale: 1:62.5
Section 2, Township 8 North, Range 24, East, W.M.

Date of Construction: 1911

Present Owner: Benton County
County Engineer
Benton County Courthouse
Prosser, Washington 99350

Present Use: Vehicular and Pedestrian

Significance: The Grant Avenue Bridge is significant as the oldest and least altered example of a two span pin-connected Parker truss within the state. It is also the only existing highway bridge within the state that demonstrates the once common practice of erecting a short pony truss approach span in combination with longer through trusses.

Transmitted by: Jean P. Yearby, HAER, 1985

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In 1911, the Grant Avenue Bridge was erected over the Yakima River to replace a timber structure which had been built in 1890 and had washed away in the flood of 1906. D. C. Maloney erected this three-spanned, 458-foot bridge which consists of two pin-connected 189-foot Parker steel through trusses and one pin-connected Pratt steel pony truss. The trusses, which rest on concrete abutments and two intermediate concrete piers, support a timber deck roadway 19.8-feet wide, curb to curb.

The two through trusses are each composed of nine panels. Seven panels are braced with rectilinear eyebars which resist the load in tension. The diagonals in the three center panels are countered with a pair of cylindrical rods adjustable by turn-buckles. The base of the hip vertical of the two through trusses consists of riveted angles and plates, and is connected by a pin to a pair of cylindrical rods. The center two panels of the four panel pony truss are braced with a pair of rectilinear eyebars countered with a single cylindrical rod.

The Grant Avenue Bridge is an early example of the Parker truss within the State. This truss type was developed during the mid-nineteenth century. In contrast to the uniform depth of the parallel chords of the basic Pratt truss, the polygonal top chord of the Parker truss, which reaches its greatest height at the center panels, reflects the increase in bending moment that occurs from the ends of the truss to the center. The use of the arched top chord increased the rigidity of the structure, and enabled the construction of longer spans.

Because it was usually more economical to fabricate and erect spans of standard to at least uniform length, and because these lengths did not always coincide with the length of the ravine or waterway to be crossed, it was often necessary to add a short pony truss approach span. The Grant Avenue Bridge is the only existing highway bridge within the state which demonstrates the once-common practice of erecting a short pony truss approach span in combination with longer through trusses.